

SEMICONDUCTOR DEVICE CONTAINING HALL-EFFECT ELEMENT

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Inventor: OTSUKA KOJI

Applicant: SANKEN ELECTRIC CO LTD

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- International: H01L43/06; G01R15/20; G01R19/00; H01L27/22;
H01L43/06; G01R15/14; G01R19/00; H01L27/22;
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H01L27/22

- European:

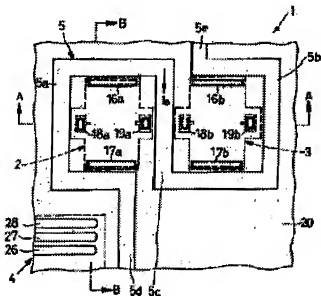
Application number: JP19990281745 19991001

Priority number(s): JP19990281745 19991001; JP19980296022 19981002

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Abstract of JP2000174357

PROBLEM TO BE SOLVED: To obtain a semiconductor device which makes it possible to detect a current through an electric circuit with accuracy and ease by means of a Hall-effect element. **SOLUTION:** In addition to a semiconductor device 4 for an electric circuit, first and second Hall elements 2 and 3 for current detection are formed on a semiconductor substrate. A conductor layer 5, where the current of the semiconductor device 4 flows, is formed on the insulating film 20 on the surface of the semiconductor substrate. In order to enhance sensitivity, the conductor layer 5 is so arranged that it extends along the first and second Hall elements 2 and 3. Magnetic flux produced by a current passed through the conductor layer 5 is applied to the first and second Hall elements 2 and 3. In order to enhance sensitivity, an added value is obtained by adding up the first and second Hall voltages obtained from the first and second Hall elements 2 and 3.



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Family list3 family members for: **JP2000174357**

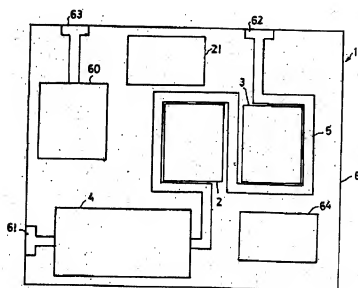
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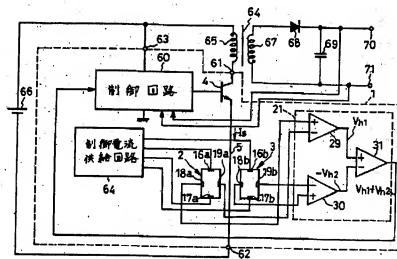
- 1 SEMICONDUCTOR DEVICE CONTAINING HALL-EFFECT ELEMENT**
Inventor: OTSUKA KOJI **Applicant:** SANKEN ELECTRIC CO LTD
EC: **IPC:** *H01L43/06; G01R15/20; G01R19/00* (+9)
Publication info: **JP2000174357 A** - 2000-06-23
- 2 Semiconductor device having a hall-effect element**
Inventor: OHTSUKA KOJI (JP) **Applicant:** SANKEN ELECTRIC CO LTD (JP)
EC: *G01R15/20B; G01R33/07; (+1)* **IPC:** *H01L43/00; H01L43/06; H01L43/00* (+2)
Publication info: **US6424018 B1** - 2002-07-23
- 3 SEMICONDUCTOR DEVICE WITH HALL-EFFECT ELEMENT**
Inventor: OHTSUKA KOJI (JP) **Applicant:** SANKEN ELECTRIC CO LTD (JP);
OHTSUKA KOJI (JP)
EC: *G01R15/20B; G01R33/07; (+1)* **IPC:** *H01L43/00; H01L43/06; H01L43/00* (+2)
Publication info: **WO2004075311 A1** - 2004-09-02

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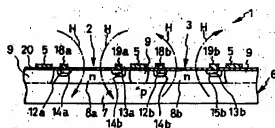
【图1】



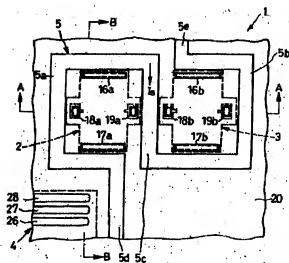
【图2】



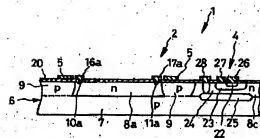
【图4】



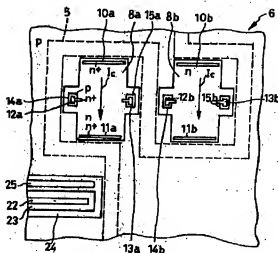
【図3】



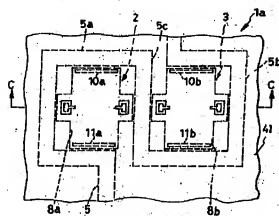
【図5】



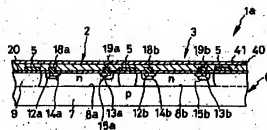
【図6】



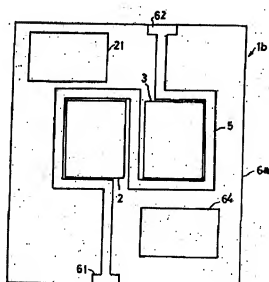
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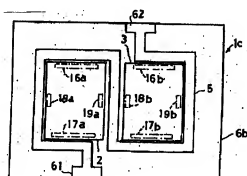
【図8】



【図9】



【図10】



【図11】

